



Cromwell Dixon and a Curtis Pusher aircraft, taken at the Helena Fairgrounds, September 13, 1911. (Photo from the L. H. Jorud Collection, NW Repro).



MONTANA AERONAUTICS COMMISSION

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RESIGNATION

AND TITLE CHANGE

At the December meeting of the Montana Aeronautics Commission, the Commission accepted the resignation of Duane Jackson from the position of Assistant Director for Aviation and Space Education. Jackson has been employed by the Aeronautics Commission in the field of aviation education since September, 1968. He leaves the Aeronautics Commission staff to take the position of Foreign Language Supervisor in the office of the State Superintendent of Public Instruction.

The Commission acted to retain Jackson on an interim unpaid basis as Aviation and Space Education Consultant.

NOTICE CHANGE IN 1972 AIRPORT DIRECTORY

The length of the runway at Plentywood Airport should read 3200 feet and **not 2000 feet**.

Montana pilots and Directory holders should make this correction in their individual directories.

During the close Mars approach to Earth in early August, the planet was about 35 million miles away, and was the fourth brightest object in the sky.



Seated, left to right: William E. Hunt, Dixie Mays, Robert W. Dunn. Standing: Ronald F. Rardin, Roy M. Raasina, Robert O. Brown, Roger C. Ritchey, George L. Buley.

NORTHWEST NASAO OFFICIALS MEET IN SEATTLE

Officials of the Northwest Region of the National Association of State Aviation Officials met in Seattle January 11, 1972, to discuss matters of mutual interest to the northwest states. Held at Seattle's Boeing Field, the meeting was called by Montana Aeronautics Commission Director William E. Hunt. Hunt is Regional Vice-president for NASAO.

Present at the meeting were: Director Dixie Mays and Ronald F. Rardin of the Washington Aeronautics Commission; Director Robert W. Dunn, Ralph W. McGinnis, Roy M. Raasina, Roger G. Ritchey of the Oregon State Board of Aeronautics; Director Hunt and Randy Bowsher of

the Montana Aeronautics Commission; Robert O. Brown and George L. Buley of the Seattle FAA.

All the persons present agreed that planning between the states should be coordinated so that wherever possible there can be mutual support and aid for aviation in the northwest states.

REGISTRATION

Less than half of Montana's Pilots and Aircraft Owners have registered with the Montana Aeronautics Commission for 1972. The Commission would like to urge all Montana Pilots and Aircraft Owners to please hurry and register.

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of the
MONTANA AERONAUTICS
COMMISSION**

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**FEDERAL AVIATION
ADMINISTRATION
ITINERARY LISTINGS**

Airport	Jan.	Feb.
Great Falls	6	3
Havre	3	10
Missoula	20	17
Kalispell	19	***
Butte	***	2
Culbertson	***	5
Glasgow	20	***
Glendive	***	16
Lewistown	***	19
Miles City	***	16
Sidney	19	***

NOTE: Provisions have been made to give private, commercial and flight examinations ON AN APPOINTMENT BASIS ONLY at the following FAA Flight Service Stations.

Flight Service Stations.

Bozeman	Lewistown
Butte	Livingston
Cut Bank	Miles City
Dillon	Missoula

Great Falls

NOTE: Until further notice GADO #1 in Billings will be open the third Saturday of each month ON AN APPOINTMENT BASIS ONLY!

Recently - released FAA statistics show that of the 720,028 U.S. pilots, nearly 42% are private pilots. There were 299,491 private pilots in 1969 compared with 140,573 ten years ago.

Director's Column



If the past year is any indication of the future, then it is obvious that the Montana Aeronautics Commission will have a different approach for its work. In 1970 when the Congress passed the Airport/Airways bill, it became increasingly clear that future construction and development of aviation facilities would have to be planned and coordinated with all segments of our society. Producers, manufacturers, residents in residential districts, environmentalists, ecologists, and practically everyone you can think of would have to be considered in the future development of aviation facilities.

While there is never a clear break in time, it does seem that from 1945 when the Montana Aeronautics Commission was founded by the Legislature, until 1970, quantity as well as quality took part in the development. Airports were built throughout the state and only two counties in Montana are now without an airport. There are airports in the wilderness areas, on the prairies, recreation areas and wherever people wanted an airport the Aeronautics Commission attempted to establish one for them, or at least help them in their efforts to obtain an airport. While the saturation point for new airports has not been reached, the pressure to build new airports has decreased substantially and the Aeronautics Commission functions in the future seems to be planning and coordinating a somewhat slower developing airport construction and expansion plan. This is not to say that we do not welcome inquiries from anybody desiring to develop a new airport as we are quite prepared to help out where we can.

One of the first steps in planning for the Aeronautics Commission is the completion of the State Airport/Airways Plan. Each state is undertaking a plan pursuant to the authority of the 1970 ADAP bill and the fifty completed plans will become the National Airport/Airways System. For this reason we are particularly interested in coordinating with every one to make sure that we do have a plan that represents the best possible guidelines for the future of airport and airways development in Montana. We expect to complete that plan this year and have it available to interested persons in the fall of this year.

I hope that all of you will find the time to answer the questionnaire which is in another part of this newsletter concerning the beacons. Even though you may not have used them a great deal, or not used them at all, we would appreciate your comments about the continued existence of these beacons. I believe that there is enough information in other parts of the newsletter to explain the problem and our need for your comments to arrive at a decision.

One of the services offered by the Aeronautics Commission that seems to be most appreciated by Montana pilots, is the Montana Airport Directory and Montana Chart that is furnished to a pilot upon initial registration and the updating of the directory annually and distribution of charts when they are printed, which is about every two years. We have found that rising costs have made it necessary to look to the possibility of raising these prices. Hopefully it can be delayed a while longer but it does not look like it can be put off indefinitely. For this year, at least, the services will remain the same and if there is any change you will be notified of it in plenty of time to have your comments.

This time of the year brings about many inquiries about pilots who have to register, wondering why. The answer is simple, the Montana Sta-

tute requires that the Aeronautics Commission register all pilots who are operating in the state. One of the advantages to the Aeronautics Commission is the knowledge of having the name of those pilots who are willing and able to assist in searches and other emergencies that the Aeronautics Commission may call upon them to perform. Registration does serve a valuable need but if the pilots of Montana are not in agreement and enough interest is shown, we would be glad to approach the Legislature with the idea of repealing this law. Your comments are more than welcome.



Film Clerk Eric Lieberg

MAC FILM LIBRARY REQUESTS INCREASE

The requests for aviation films sent to the Montana Aeronautics Commission increase each year and 1971 was no exception. There were nearly 1,500 requests filled during the preceding 12 months and over 20% of these were from out-of-state according to Commission Film Clerk Eric Lieberg.

Lieberg said that some cooperation by Commission film users could speed up the filling of film requests: Notify the Commission any time that a poor print is received so that a new one may be obtained to replace it. Do not rewind the films after screening since all films must be rewound upon their return to the Commission to check for and make any needed repairs.

FAA LIFTS IMMUNITY POLICY

FAA, January 6, 1972 — The Federal Aviation Administration of the Department of Transportation has discontinued its four-year old policy of granting immunity from enforcement action to persons reporting near mid-air collisions.

FAA said the immunity provision had served the intended purpose of providing the agency with increased information on near midair collisions in order to facilitate the development of a remedial action program to reduce the collision potential. This having been accomplished, FAA believes a continuation of the immunity provision no longer is necessary.

Under the immunity policy, which was first instituted in 1968 and subsequently extended for three successive years, FAA agreed to take no enforcement or other adverse action against any pilot or controller reporting a near midair collision even though investigation disclosed he had violated a regulation. A further provision allowed for withholding the identity of the person involved in the incident, as well as the report itself, upon the written request of the person making the report.

On the basis of the collected data, FAA developed a 20-point program for preventing midair and near mid-air collisions. Among the major recommendations, which are in the process of implementation, were the establishment of terminal control areas at major airports, expansion of area navigation airways and terminal procedures and creation of a standard traffic pattern at non-tower airports.

The action terminating the immunity policy was based on a notice issued on 20 October soliciting public comments on the change in policy. Analysis of the comments submitted revealed that while many favored continuation of the policy, they failed to show how continuation would enhance air safety by contributing new or useful information not already

available from studies of the past programs.

The agency will continue to encourage the submission of near mid-air collision reports and will strive to take corrective action on these reports that is of a positive rather than disciplinary nature.



YOUR ACCIDENT PREVENTION COUNSELOR IN ROUNDUP

This month's Accident Prevention Counselor, Roland T. Albright, is the President and General Manager of Albright's Flying, Inc., in Roundup, Montana. His FAA certificates include: Commercial—ASEL; Flight Instructor—Glider; Mechanic—Airframe and Powerplant with Inspector Authorization. Albright has attended two Instructor and two Mechanic Seminars presented by the Montana Aeronautics Commission.

A native of Idaho, Albright attended schools in Lewiston and received his initial aviation training there. He first soloed at Clarkston, Washington, after learning to fly at Hillcrest Aviation of Clarkston and Lewiston, Idaho. He served with the Navy in World War II as a Radio Technician.

As manager of Albright's Flying, Inc., Albright does crop spraying, tows gliders, drops skydivers, gives instruction in gliders and aircraft, and rebuilds planes.

Albright presently resides in Roundup with his wife Dorothy and daughter Wenda.

AIRPORT NOTES



By Worthie M. Rauscher
Deputy Director

TERRY—The Aeronautics Commission met recently with the newly-formed Airport Board at Terry to discuss future improvements for this Airport. The Board is moving ahead vigorously with plans to extend their main runway and with adequate land already purchased it is hoped that this extension will be completed during the coming construction season.

NOXON—A meeting was held recently in the Sanders County Courthouse between the Commissioners of that County, a representative of the Aeronautics Commission and other interested parties to discuss the possibility of establishing an emergency airstrip in the Noxon area. This proposed emergency field has been discussed with varying degrees of enthusiasm for many years with its proponents firmly convinced of its value due to the unpredictable weather which often prevails in that area. As a result of this meeting, the local people are taking some preliminary steps to explore land ownership, etc.

PLAINS HOSPITAL HELIPORT—At the request of the Administrator of the Clark Fork Valley Hospital a representative of the Aeronautics Commission traveled to Plains recently to discuss the possibilities of a hospital heliport for that facility. This beautiful new unit is an asset not only to the City of Plains but the entire Clark Fork Valley and there appear to be very good possibilities that a heliport will be constructed. Located, as it is, in the heart of recreation, logging and hunting areas, it

is a prime location for the use of helicopter ambulance.

BOZEMAN DEACONESS HOSPITAL HELIPORT

HELIPORT—Two meetings have been held at the hospital which included representatives of the Aeronautics Commission, the hospital Board of Trustees, hospital Administrator and representatives of Chet Huntley's Big Sky of Montana, Inc. Interest is keen for this progressive hospital and although suitable locations are somewhat limited, it is felt that the determination of the local community will ultimately result in an emergency heliport to serve this hospital. Many existing factors such as the proximity of hunting, recreation and logging activities, availability of helicopters for use as ambulance, etc., make the Bozeman area a logical choice for a hospital heliport.

HOBSON AND CASCADE—Interested locals have attempted for several years to cause Airports to be built which would serve these two communities with land acquisition the major obstacle. It now appears that some progress is being made at both communities in this regard and for that reason, local interest has been revitalized.

POLSON H-MARKER—Latest addition to the Montana Aeronautics Commission's H-Marker system is the Polson H-Marker which was placed into operation on the 17th of December. It operates on the assigned frequency of 275 KHz with an identifier of PLS. It is a public use VFR facility. This station should prove valuable not only to pilots flying into and out of Polson but to anyone flying in this area of our State.

Of the more than 200 million pieces of luggage that airlines handle every year, less than three-tenths of one percent are lost. The airline delivers those found to the passenger's home or hotel. If damaged, they are repaired by the airline, and if the lost pieces are not found, the passengers are compensated up to \$500.

FLIGHT INSTRUCTOR REFRESHER COURSE TO BE IN MARCH

The Montana Aeronautics Commission will hold its annual Flight Instructor Course March 6-10 in Great Falls. Ground school classes will be conducted at the Ponderosa Inn by Federal Aviation Administration personnel and representatives of the National Weather Service.

Additional information and applications are now being mailed to Montana Flight Instructors.

The Commission would like to urge all Instructors to return these applications as soon as possible since attendance is limited. February 18 is the last day that the applications will be accepted.

NAMMACK NEW NASAO EXECUTIVE

WASHINGTON, D. C., JAN. 25—Appointment of John A. Nammack as executive vice president is announced by the National Association of State Aviation Officials. NASAO represents 46 of the 50 states and Puerto Rico.

Mr. Nammack is editor of *Airport Services Management*, the professional airport magazine, with 20 years background in aviation.

He served six and a half years as a U. S. Air Force Pilot. After leaving USAF in 1957, he was associated with several aviation publications, including *Aviation Week*, *Flying*, *Business and Commercial* editing publications in Latin America.

Mr. Nammack was graduated from Georgetown University with a B.A. degree and took graduate work at New York University. He is married and has four children.

NASAO's member State aviation departments and commissions are spending more than \$180 million a year in airport development plus further investment in air navigation aids, safety, aerospace education, and promotion of air progress in the public interest. Joseph R. Crotti, California Director of Aeronautics, currently serves as President of NASAO.

CONGRATULATIONS



FAA CERTIFICATES ISSUED RECENTLY TO MONTANA PILOTS

PRIVATE

Orval Markle—Glasgow
Joseph Nevin—Billings
Phillip Houtz—Billings
Allen Hartman—Billings
Henry Metcalfe—Moccasin
Oscar Quashnick—Calgary, Alberta,
Canada
Thomas Conroy—Calgary, Alberta,
Canada
Marjorie Conroy—Calgary, Alberta,
Canada
John Strandquist—Cranbrook, B. C.,
Canada
Wilfried Muller—Calgary, Alberta,
Canada
Alan Mallory—Libby
John Fenske—Kalispell
Janet Slack—Kalispell
Joseph Schoener—Great Falls
Jack Morgenstern—Missoula
Peter Zak—Blairmore, Alberta,
Canada
Gus Johnson—Great Falls (Glider)
Richard Geiger—Valier
Roy Rummel—Butte
Joel McCullough—Gallatin Gateway
Lyonald Thompson—Conrad
Floyd Orr—Stevensville
David Buck—Missoula
Warren Pilcher—Fairbanks, Alaska
Charles Martin—Conroe, Texas
Jay Shoop—Kalispell
Larry Brenholt—Arlee
Robert Lochmiller—Missoula
O. Morrow—Great Falls
Thomas Kiely—Butte
Roy Morton—Missoula
Loren Kauffman—Kalispell
Victor Ellis—Pilot Butte, Sask.,
Canada
Noel Emond—Malta

COMMERCIAL

Armand Pelletier—Wetaskiwin,
Alberta, Canada

Ronald Belcher—Billings
Stanley Peters—Calgary, Alberta,
Canada

Gary Carlson—Billings
Douglas Greven—Minneapolis,
Minnesota

Terrance Young—Conrad
Francis Krooth II—Great Falls
Larry Ostby—Froid
Ronald Lindseth—Great Falls
Jack Creek—Great Falls

ROTORCRAFT-HELICOPTER

Michael Phillips—Hysham
(Commercial)
Bary Burns—Billings (Military
Competency)

INSTRUMENT RATING

Gus Johnson—Great Falls
Stephen Little—Missoula
John Shoffner—Great Falls

ATR

John Burt—Northglenn, Colorado
Walter Arensmeyer—Choteau

FLIGHT INSTRUCTOR

Patricia Dower—Butte (Instrument)
Thomas Powers II—Great Falls
(Instrument)
Robert Holman—Great Falls
(Gold Seal)

GROUND INSTRUCTOR

Harry Corbin—Miles City (Basic)
Michaele Tessitore—Stevensville
(Advanced)
Robert Christensen—Great Falls
(Instrument)

AIRFRAME MECHANIC

James Brown—Great Falls

POWERPLANT MECHANIC

Robert Besinque—Billings
William Corbett—Libby
Gary Herem—Red Lodge
Johnny Kelly—Great Falls

TYPE RATINGS

SK-58
Michael La Sorte—Billings
DC-3, DC-4, N-265
Russell Janzen—St. Albert, Alberta,
Canada

BILLINGS GADO PRESENTS LEWISTOWN SAFETY SEMINAR

The first seminar of the 1972 season was held at Lewistown, Montana, January 8, at the Yogo Inn.

A total of fifty-three people attended the day-long session which began at 9:30 a.m.

Billings General Aviation District Office personnel offered presentations in their particular specialties were: James R. Crouse, Maintenance Unit Chief, gave "In the Green" which dealt with engine operation, fuel problems, and cold weather tips. David C. Voxland, General Aviation Operations Inspector, spoke on "Winter Flying" and outlined precautions needed for cold weather flying plus demonstrations of a self-assembled survival kit. Carl A. Hutchinson, Electronics Unit Chief, spoke on the subject, "Weather to fly," dealing particularly with Montana and mountain weather along with a film depicting this type of operation. Accident Prevention Specialist, George S. Batchelder, Jr., spoke on "Preflight the Pilot" and gave demonstrations of the Barany chair plus a film, "Medical Facts for Pilots." Donald J. Woodward, Lewistown Flight Service Station Chief, talked on pilot briefing and the particular aspects of flying in the Lewistown area. Chief Woodward also went into detail on Direction Finding operation and illustrated the approach and procedures for the Lewistown Flight Service Station.

The seminar was well received and several lively discussions resulted with audience participation rated excellent. Coffee and refreshments were furnished by the Central Montana Pilots' Association and a dinner party and dance were held in the evening after the seminar.

Ice affects the flying qualities and characteristics of an airplane. The most serious thing it does is destroy smooth air flow, and make a different airplane of the one we know. The weight of the ice is of secondary importance.

AVIATION EDUCATION HIGHLIGHTS



By DUANE JACKSON
Aviation and Space Education
Consultant

As many of the Newsletter readers may already know, I have recently resigned from my Aeronautics Commission staff assignment as Assistant Director for Aviation and Space Education. Of course, I will miss my close working relationship with the people who make up Montana aviation. However, my own personal interest in aviation and my temporary role as Aviation and Space Education Consultant will no doubt allow me to continue many of the much appreciated and rewarding associations have enjoyed over the past three years. I will from time to time submit Newsletter articles of interest. Such is the following:

In the switch over between the Aeronautics Commission and the Office of the State Superintendent of Public Instruction, I took a three week vacation and returned to the Soviet Union on a trip which was primarily concerned with a study of Soviet Civil Aviation. The trip was sponsored by Embry Riddle Aeronautical University and organized by Jack Hunt, President of Embry Riddle.

This was a fantastic trip! There is no easy way to convey the full extent of the things that we did and saw. However, I will try to outline what I thought to be major points of interest. First, I should say that at no time were we treated rudely or antagonistically. Just since my return, Soviet-American relations have been much in the news. U. S. immigration people were detaining a Soviet student to assure he really did want to return home. Soviet officials were expelling Congressman James Sheuer of New York, and our Moscow embassy air attache' was allegedly beat-



Tour group including Dr. Jack Hunt, President of Embry Riddle University, Dr. Mervin K. Strickler, Jr., Chief of Aviation Education Program Division—FAA Washington, D.C., Aviation Consultant Jackson.



Ilyusin — 62 Jetliner

en by Russians at the Riga Airport because they thought he was taking pictures. What a strange contrast to every aspect of our trip!

We visited with Aeroflot officials, saw airports, aircraft and air control procedures. We saw all three Aeroflot airports in Moscow and visited repair facilities at Domodedyovo and Vnukovo. In Kiev we visited the Aeroflot Institute for training of flight

engineers and at Leningrad we visited the Academy where Aeroflot pilots and copilots are trained. During our three week stay we were accompanied by an English speaking tourist guide and Aeroflot provided an English speaking engineer from its Moscow office to assist and coordinate our trip.

What did I not see? I did not see general aviation. Many of the group



Four engine turbo prop AN 54



Sheremetev International Airport Terminal at Moscow.

remarked upon our return trip landing in Copenhagen, how nice it was to see small planes on the airport. The smallest plane or simulator which Aeroflot has is the somewhat antiquated AN-2, the biplane which was pictured in the September Newsletter. Aeroflot does, incidentally, train pilots for ag-aviation as well as for what would compare to our charter aviation. Small planes are not seen

at airports operated by Aeroflot. The reason as stated by air traffic controllers in Leningrad was that they are not permitted there, that they have their own airports.

In the Soviet Union any flight activity which would be roughly equivalent to our large segment of pleasure flying is called "sport aviation." Pilots who fly in these clubs win the privilege by competition with other

interested youth, first in model airplane competition as organized in the Young Pioneer clubs. Those who do get into sport aviation have equipment and facilities provided to them. There is no private ownership of aircraft. The fact that these small aircraft have only emergency access to the air transport airports also helps to explain why the international airport at Leningrad looks more like quiet time at Logan Field. (This is, of course, an incomplete and therefore probably unfair comparison. I do not have traffic count figures for Leningrad, but, although one sees a large number of aircraft on the ramp, the airports do not appear to be busy.)

We did see the Aeroflot training facilities for all flight crew and I believe that all of our group, which included Dr. Melvin Stricker of FAA, Washington, D. C., and a copilot from United Airlines, were of the opinion that flight crews receive much more training before active employment than do U.S. flight crews. Both the Institute in Kiev and the Academy in Leningrad operate five year programs which are, I believe at least equivalent to, engineering courses in the States which lead to B.S. degrees. Of some interest is the dichotomy between flight engineers and pilots. A flight engineer does not work up to flying status in Aeroflot.

We did not learn anything specific about cabin attendants. I was told that all flights had at least three attendants. However, a passenger, or this passenger, still only sees one. For the interest of men's lib, I should mention that our Moscow-Kiev flight had a steward.

For the interest of Montana Pilot Hangars and other interested groups, I believe I have slides enough to present a variety of interesting short programs. (The Russians did not seem to mind our picture taking.) Whenever the opportunity can be coordinated, I would be happy to talk to aviation groups about Soviet Civil Aviation.

ALWAYS FILE A FLIGHT PLAN

AIRWAY BEACONS — A REPORT AND REQUEST FOR COMMENT



By David C. Kneedler

Navigational Aids Supervisor

The Montana Aeronautics Commission has been involved in the beacon business in varying degrees since shortly after its creation in 1945. This involvement has taken various forms from technical assistance through the operation of an airways beacon system to actually providing communities with new or surplus airport beacons. The airways beacon portion of this program came into being in 1965 with the decommissioning of a large block of FAA beacons in our State. From information gained through a survey of opinions of Montana pilots and also additional study on the part of the Aeronautics Commission it was decided that, in the interest of aviation safety twelve of the decommissioned beacons should continue to be operated in their existing mountain-top locations. Since the federal government was not inclined to do this our airways beacon program was born.

These beacons as they are currently operated by the Montana Aeronautics Commission are:

Boulder Pass, South of Helena;
Whitetail, North of Whitehall;
Spokane Hill, East of Helena;
Strawberry Butte, Northwest of Bozeman;

Canyon Resort, Southwest of Dillon;

Stony Point, North of Helena;
Wolf Creek, East of the City of Wolf Creek;

Hardy, Southwest of Great Falls near Cascade;

Avon, West of Helena near Avon;
Bonita, Southeast of Missoula near Elliot Field;

Alberton, Northwest of Missoula;
St. Regis, East of the Town of St.

Regis.

At the same time, the FAA was "encouraged" by comments received from your Aeronautics Commission, various aviation organizations and many Montana pilots to continue operating eight of their existing lights. These were:

Bozeman Hill, Southeast of Bozeman;

Bozeman Pass, Southeast of Bozeman;

Homestake, East of Butte;
Silver Bow, West of Butte;
Montana City, Southeast of Helena;
McDonald Pass, West of Helena;
Sherman Gulch, North of Missoula;
University Mountain, West of Missoula.

A total of twenty airway beacons, then, are operating currently in Montana with the idea or assumption that they provide a valuable margin of safety in night VFR operations.

A recently completed in-depth study by the Commission has shown that the State-owned lights are being operated and maintained at an average cost of \$459.72 per year per beacon. The individual costs per beacon, per year range from a low at the Hardy Beacon of \$254.54 to a high of \$1,702.86 to operate the Strawberry Butte Beacon. This study also produced an estimate of \$38,964.68 to decommission and remove the twelve State beacons.

We are responsible to review the use being made of all airway beacon lights for the purpose of justifying

their retention or decommissioning. The first step in this process was the aforementioned in-depth study which produced certain conclusions which will be considered in making the final decision. In addition we are anxious to receive the comments and thinking of all Montana pilots and are taking this means to solicit your help in this matter. As you may know the Federal Aviation Administration is again proposing to decommission their eight beacons mentioned above and so the questions which we must answer are: 1. If the federal beacons are in fact decommissioned are they valuable enough to aviation safety to warrant their continued operation at Commission expense; 2. Is sufficient use being made of the twelve State-owned beacons to warrant their continued operation; 3. Should our airways beacons program be cut back, continued as is, expanded to include the eight FAA beacons, or dropped altogether.

Accordingly, we are requesting specific information on the use being made of each individual airway beacon light and that comments be submitted on those beacons of which you have personal knowledge. Your feelings and desires may be made known through the use of the questionnaire below. Closing date for comments will be March 31, 1972. Comments received on or before this date will be considered in the final decision regarding the above questions.

Airman rating.....Total hours.....Hours per year.....

Hours nite VFR last year.....

Name Airway beacons used last year and number of times used:

Should the MAC's Airway Beacon Program: (check one)

Be reduced..... Be continued as is..... Be discontinued.....

Take over the 8 FAA beacons.....

The Montana Aeronautics Commission would appreciate any additional comments that you may have in addition to this questionnaire.

IFR PILOT EXAM-O GRAM* NO. 34

IFR DEPARTURE CLEARANCES

Department of Transportation
Federal Aviation Administration

This Exam-O-Gram is presented as a ground instruction aid to assist pilot and flight instructor applicants for the Instrument Rating Written Test. The information and advice given will also be of value to the newly-rated instrument pilot.

Instrument flight instructors can recall a variety of student reactions to an unexpected call from the controller with "your ATC CLEARANCE." This may confuse the inexperienced pilot, particularly if he is already busy taxiing, performing instrument cockpit checks, and watching for other traffic. The point to remember is—DON'T SAY YOU ARE READY TO COPY UNTIL YOU ARE READY! Simply tell the controller to "Stand By" until you are fully organized and prepared to receive your departure clearance. The controller has no way of distinguishing between an inexperienced pilot and one who knows the local area as well as he knows his own back yard. The controller assumes that you are a competent instrument pilot, that you have learned—and are proficient in using—clearance shorthand, and that you are familiar with appropriate route data. Until you reach the level of competence necessary for flying under Instrument Flight Rules in areas of high density traffic, you should stay away from them. If you are a novice in copying clearances, alert the controller by telling him to "Go Slow." If you are flying without a co-pilot, you should keep some additional points in mind in connection with IFR departure clearances. "Ready to copy" should mean at least the following:

1. Your airplane is under control, preferably stopped, parking brake set.
2. You are ready with writing materials.
3. Your radio(s) are properly tuned, volume at readable level.
4. Route data at hand (including Enroute Chart, Area Chart, SIDs, and STARs as appropriate). The route specified in your clearance may differ with that you filed in your flight plan. If the routing is different, and you elect to read back the clearance, read it back as issued then check the routing. If you desire clarification or you have objection to the routing, question it then. In accepting a clearance, you assume responsibility for complying with it.

The IFR departure clearance you receive depends on several factors:

1. HAVE YOU INDICATED YOU WILL NOT ACCEPT A STANDARD INSTRUMENT DEPARTURE (SID)? Controllers may issue a clearance containing a published effective SID to any departing aircraft, unless otherwise requested verbally by the pilot or by inclusion of "NO SID" in the remarks section of the filed IFR flight plan. Therefore, if you do not indicate as stated above, you should be familiar with all SIDs for the departure airport and have copies of them in the cockpit. Be certain to note and adhere to all altitude restrictions.
2. HAVE YOU REQUESTED A "DETAILED CLEARANCE"? If you do not specifically request a detailed clearance from Ground Control or Clearance Delivery, you will probably be issued an "abbreviated departure clearance," provided the route filed in your IFR flight plan can be approved with little or no revision.
3. WILL THE FLIGHT BE IN A RADAR OR A NON-RADAR ENVIRONMENT?
 - (a) If the flight is in a radar environment (and an abbreviated departure clearance is issued), the controller will state, "CLEARANCE AS FILED," followed by an assignment of an altitude/flight level and any additional instructions or information required.
 - (b) If the flight is in a non-radar environment (and an abbreviated departure clearance is issued), the controller will state, "Cleared AS FILED," and will specify one, two, or more fixes necessary to identify the initial route of flight, followed by an assignment of an altitude/flight level and any additional instructions or information required.

* EXAM-O-GRAMS are non-directive in nature and are issued solely as an information service to individuals interested in Airman Written Examinations.

NASA says that about 15 pounds of the 94-pound cache of rock and soil samples returned from the Moon's Fra Mauro formation by Apollo 14 will be passed to 187 U.S. and foreign scientific teams. Investigating teams of those selected so far in the U.S. are located at 65 different institutions in 30 states and the Virgin Islands. The 56 foreign teams are located at 41 institutions.

An airline reservation can be made to any place in the world, on any airline with only one phone call at any time of the day or night, seven days of the week.

To improve mail delivery, the Postal Service has announced plans to add 39 new air taxi mail routes to the system.

The wing area (5,500 square feet) of a Boeing 747 is larger than three three-bedroom homes or a college basketball court. In fact, you could even park one 737 on each wing.

Virtually every survey taken by one airline shows that, after safety and dependability, the next thing the air traveller values — above food and facilities — is courtesy.

FAA INSPECTOR'S CORNER



By George S. Batchelder, Jr.
Accident Prevention Specialists
GADO No. 1, Billings
WE CAN DO BETTER

It is the time of year when we look at where we've been and where we ought to be going. In looking through the accident file, a pattern shows itself in the number of ground loops, cross-wind accidents, and associated loss of control from gusting wind conditions. Five of these types of accidents happened on ranch strips; most of which were narrow, not too long and with obstacles nearby. These strips actually called for more skill and proficiency — not less as evidenced by the experience level of the pilots involved.

The accident sites were quite remote and the pilots felt they were completely free to keep trying until they were able to handle difficult approaches and landings. The price of self-instruction gets most expensive as these flyers have discovered and while most of them were alone, they add to the overall totals that make operation of an aircraft more expensive every year. The reasoning (or lack of it) these pilots use is that they are out and away from any traffic and they are hurting no one but themselves. Nothing could be further from the truth. Every accident makes it tough on the rest of us. The news media likes nothing better than an aircraft accident, generally with pictures. Somehow automobile accidents make page 8 but not aircraft accidents.

Flying calls for mental and physical application. We have all discovered that our golf game, our bowling, our skiing all suffer with a lay-off and so it is with flying. When you haven't flown for a few weeks, take a ride with your instructor before going out to try the Montana winds or

start that long, cross-country. Every pilot needs to honestly ask himself how much dual or refresher has he had since getting his license. Every student must continue his training for a license or give up flying. Professional students are becoming an increasing problem and something must be done to convince these people to complete their training and become pilots.

We hear of experienced pilots still playing "Russian roulette" by "scud running," picking up ice, and in general gambling with the lives of their passengers. We hear of drinking and flying, students carrying passengers, and unairworthy aircraft but when asked for statements the witnesses do not want to get involved. After every fatality we hear things like, "I knew it was going to happen," or, "It was just a matter of time." Had a statement or a few honest words of advice or warning been given in time, fewer deaths would have been recorded this past year.

No laws, regulations or rules made can possibly make the pilot think.

Make 1972 the year **YOU THINK!**



By Lauren D. Basham
Accident Prevention Specialist
Rm—GADO No. 5, Helena

"CARBURETOR ICE"

Winter is by no means the worst flying season of the year in our Intermountain Region. It may be grim in Alaska and the Far North but in some regions, flying conditions are often superior to those found in most of the other seasons.

What we call "Winter Weather" usually makes its presence known in late autumn, intensifies during the true winter months and tapers off as spring enters mid-season. Our winter owes its onset to changes in temperature, wind, moisture and interaction of the air masses with the terrain.

In the Intermountain Region, there are many bright, crisp days when the air is stable and the visibility seems unending. Nevertheless, flying conditions can and do change with great suddenness in winter so the weather must be monitored closely by all who fly.

For the IFR pilot, this may mean one field of interest and for the VFR pilot it means another. For instance, when the temperature variations run to extremes as in the case of sub-zero weather followed by the chinook, carburetor-mixing chambers can become regular ice-makers. Contrary to what some pilots may believe, carburetor icing does not require sub-freezing temperatures. The ordinary aircraft carburetor is capable of inducing a temperature drop of 60 to 70° Fehrenheit or more in less than a second. The result may well be an ice burden any engine can do without.

Early signs of engine icing are a suspicious drop in engine rpm when flying a fixed pitch propeller aircraft or a loss of manifold pressure when flying a constant speed propeller-engine combination.

If the pilot fails to notice these warning signals, he may be jolted into awareness by his engine coughing violently from fuel starvation or backfiring from an improper fuel air mixture just before complete stoppage over terrain where he can least afford it.

Most pilots are taught to use carburetor heat as standard procedure during the landing approach and whenever power is significantly reduced in flight. The carburetor heater uses warm engine heat to warm the air before it enters the venturi system. During low power operation, rpm or manifold pressure loss from carburetor ice accumulation is almost impossible to detect. Also, the amount of engine heat available is dependent upon the power setting. The engine may appear to run normally until full power is applied, sudden stoppage may then occur.

It should be mentioned that **pressure carburetors** are less susceptible to icing in the venturi throat because

of the positioning of the fuel nozzle. With fuel injection engines, the fuel is sprayed directly into the cylinder head and vaporization icing is even less likely. However, regardless of the type of fuel induction system, structural icing blocking the air scoop is possible and may call for application of heat.

Because of the design differences in the many carburetors used by general aviation, it is impossible to establish a set technique for ice removal or prevention. The only safe guide is the recommendation of the engine manufacturer.

Since the onslaught of Montana winter late in 1971, we have incurred a series of aircraft accidents which could be attributed in part to carburetor icing. In one case, a pilot failed to make the runway when his engine quit; in another, the aircraft was substantially damaged when it landed in deep snow following engine stoppage during a local flight.

Experience teaches us that these accidents which were precipitated by carburetor icing did not need to happen. The pilots involved simply failed to stay alert to well known hazards of their environment.

Education is still one of general aviation's greatest failings, whether it's basic flight or the systems of a particular aircraft we should know. So read, heed and stay alert. Don't let Carburetor Ice spoil your next flight!

JET A FUEL AT GLENDAIVE

The Montana Aeronautics Commission has been informed that Jet A fuel is now available at the Glendive Airport. Cliff Cunningham, Fixed Base Operator and Airport Manager at Glendive, said that the airport has a storage facility for 12,000 gallons.

It is expected that the projected space shuttle will reduce the present \$1,000 it costs to put a pound of payload into orbit to only \$100, and there are some estimates that this cost may go as low as \$50 per payload pound.

SAFE APPROACH



By Jack Wilson
Assistant Director
Safety and Compliance

Well, here it is, the start of a new year and it bears mentioning the accident statistics at least for the last three years to point out what a good year 1971 was, safety-wise, here in Montana. The statistics for 1969 include four searches, with fifty-seven accidents, fourteen of which were fatal accidents with thirty-one fatalities incurred for the whole year. 1970 statistics had also four searches with sixty-eight accidents, nine of which were fatal with nineteen fatalities. 1971, however, had only two searches in fifty accidents, five of which were fatal accidents with nine fatalities which is quite a reduction over the previous two years, and at the present time we have no answer for this reduction.

In previous years, usually at least 50% of the fatal accidents and fatalities have been incurred by out-of-state pilots and passengers. It could very well be that we are not enjoying the amount of tourist flying through Montana as we have in the past because of the user charges, additional gasoline taxes, etc. This very likely will be answered when the total flying figures for general aviation have been accumulated by the FAA. At the present time, these figures are not available. However, I would imagine that there hasn't been this much reduction in flying in Montana either by out-of-state or Montana personnel.

What would be ideal, of course, is that all of the safety programs, seminars, etc. would finally be bearing fruit. There is a Nation-wide accident prevention program presently being conducted by the Federal Aviation

Administration, and quite a bit of emphasis placed on mountain flying aspects, density altitude, etc. for people back in the "flat land" areas of the United States. It may very well be that a better knowledge of the mountains and the problems associated with flying in them which is being taught to the people in the mid-west and east could be making them safer pilots in the mountains. In any case, the Montana Aeronautics Commission still encourages any out-of-state pilot who is going to fly into or through Montana to contact the Commission for information which will be helpful to them during their Montana flights and give them a better idea of places to visit while in the State.

We again remind all pilots and aircraft owners that it is registration time for the aircraft and the pilot certificates with the Montana Aeronautics Commission. If you have not received registration blanks for your aircraft and/or your pilot certificate, please contact the Montana Aeronautics Commission to obtain these registration blanks.

In addition to the above it should be suggested that all pilots utilize the Flight Service Stations in Montana as much as possible. With the cut-back by the FAA of other Flight Service Stations, it appears eminent that Montana may lose four more Flight Service Stations in the very near future. There is a good cause to believe that the Flight Service Stations at Livingston, Lewistown, Cut Bank and Dillon may go down the drain if they don't receive more utilization than they have in the past. Anytime you are in the vicinity of any of these Flight Service Stations it would behoove you to call them and file a flight plan, obtain weather information, cancel a flight plan and re-file, etc.

An additional suggestion to the pilots in Montana is that they join the Montana Pilot's Association in order that the body can become as large as possible and can in reality become the voice of the pilots in Montana when contact and/or political influence is needed.

Letters to the Editor

Montana Aeronautics Commission
P. O. Box 1698
Helena, Montana 59601

Attn: Mr. Jack Wilson

Dear Jack:

Long time since we saw you but hope it will not stay that way. If you happen to get Tucson way call us up we are in the telephone directory, in the back—"Green Valley" next to the Yellow pages. We will be back in Montana about May 1, 1972. When there I at least will be available for Search as an observer and possibly the plane. Call us if needed.

In reference to "Use It or Lose It" we have been writing to Congressman Shoup and have several letters in return but it was a very short no-

tice. The FAA in a letter stated it would be in the AIM AFTER THE CLOSING. This I protested as after the fact. I cited our own experience in Oct. when Mullan was calling us at Kellogg to find out the condition of weather there. In this canyon an on the spot observation is necessary.

The Montana Flying Farmers Convention will be May 26-27-28, 1972 in Helena. We invite anyone who is a Pilot and interested in farming or a Farmer-Rancher who is interested in Flying to join us either as a member or just to be in on the festivities. Of course we hope some of your people can show up. We believe we will have a few from out of the State.

In the past year, between us we have flown our Skylane 157 hours, landed at 61 different airports in seventeen states and two Canadian Provinces. This has all been pleasure

flying. It may not be a record but we don't think many in Montana can beat it.

Sincerely,
Virgil Compton, President
Kay Compton, Queen
Montana Flying Farmers.



TOWER

OPERATIONS

NOVEMBER, 1971

	Total Operations	Instrument Operations
Missoula	4,956	588
Billings	5,883	1,802
Helena	3,638	575
Great Falls	6,830	1,416

DECEMBER, 1971

Missoula	3,548	558
Billings	5,498	1,873
Helena	2,941	611
Great Falls	4,949	1,416

MEMBER

NATIONAL ASSOCIATION OF STATE AVIATION OFFICIALS

PURPOSE.—"To foster aviation, as an industry, as a mode of transportation for persons and property and as an arm of the national defense; to join with the Federal Government and other groups in research, development, and advancement of aviation; to develop uniform laws and regulations; and to otherwise encourage co-operation and mutual aid among the several states."

P. O. Box 1698
Helena, Montana 59601



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Dec.-Jan., 1972